File: I-5231.A5 (24, B-1)

U.S. FOREST SERVICE

NORTHERN REGION

DIVISION OF STATE AND PRIVATE FORESTRY

INSECT AND DISEASE REPORT

Report No. 71-42

5220
December 1971

DETECTION SURVEY FOR DOUGLAS-FIR TUSSOCK MOTH INFESTATION IN THE NORTHERN REGION--1971

Dispose after cited
Retain for years.
✓ Library
File
Other disposition

by

Scott Tunnock and Frederick W. Honing, Entomologists
Forest Insect and Disease Branch

Outbreaks of the Douglas-fir tussock moth, Hemerocampa pseudotsugata McD., periodically occur in the Northern Region. The most recent occurred during the period 1961-65 when approximately 225,000 acres in Benewah and Latah Counties, Idaho, were infested. Small isolated infestations were also present in Montana and eastern Washington at this time. By the fall of 1965, populations collapsed and no new egg masses could be found. Factors responsible for the decline were nuclear polyhedrosis virus and parasites. An aerial application of DDT on approximately 500,000 acres of mixed spruce and fir aided in population decline in Idaho.

Tussock moth populations were not detected again until 1970 when ornamental spruce were defoliated in Spokane, Washington, and Polson and Missoula, Montana.

METHODS

A detection survey for feeding larvae was made in Coeur d'Alene, Idaho, in August 1971. In October, a detection survey for new egg masses was made in areas where tussock moths were present during the 1961-65 outbreak. These areas included Polson, Missoula, Bigfork, and Kalispell, Montana; Bonners Ferry, Sandpoint, Albeni Falls, Coeur d'Alene, and Benewah and Latah Counties, Idaho; and Deer Park and Spokane, Washington.

RESULTS

The larval detection survey made in cooperation with personnel from the Idaho Department of Public Lands and the Coeur d'Alene National Forest revealed moderate to heavy feeding damage of ornamental spruce and grand fir in four areas of Coeur d'Alene. Although no larvae were found,

presence of heavy frass accumulation indicates tussock moths are also present near the Coeur d'Alene airport. Except for the airport, no larvae were found outside the city. Forest personnel received reports of tussock moth larvae feeding in the Independence Creek and Steamboat Creek areas of the Coeur d'Alene National Forest; however, these reports have not been confirmed to date.

A pest control operator reported observing tussock moth larvae near St. Maries, Idaho, this summer. This report is also unconfirmed.

Some private homeowners in Coeur d'Alene contracted a commercial pest control operator to spray tussock moths on defoliated spruce and fir trees. Trees were sprayed from one to three times each with Sevin and Diazinon insecticide. Repeated spray applications were made to insure killing of surviving larvae. Two trees checked a few days following final spraying still had feeding and pupating tussock moth larvae. A commercial pest control operator sprayed a combination of Cythion and Karathane insecticide on a few defoliated spruce trees in Spokane. No new egg masses were found on treated trees.

Tussock moth egg masses were found on several ornamental spruce trees in Polson and Missoula, Montana; and Spokane, Washington (Figure 1).

DISCUSSION

The apparent increase in tussock moth activity during 1971 indicates populations may be building up again and there may be more damage in 1972. The forested areas on the Coeur d'Alene and St. Joe National Forests, Idaho, will be inspected carefully for tussock moth populations in 1972. Resource managers in this area should be on the lookout for larvae next summer.

Heavy defoliation from this year's tussock moth feeding will probably result in some top killing of ornamental spruce and grand fir in Coeur d'Alene, Idaho.

Tussock moth population levels are expected to continue to increase next year.

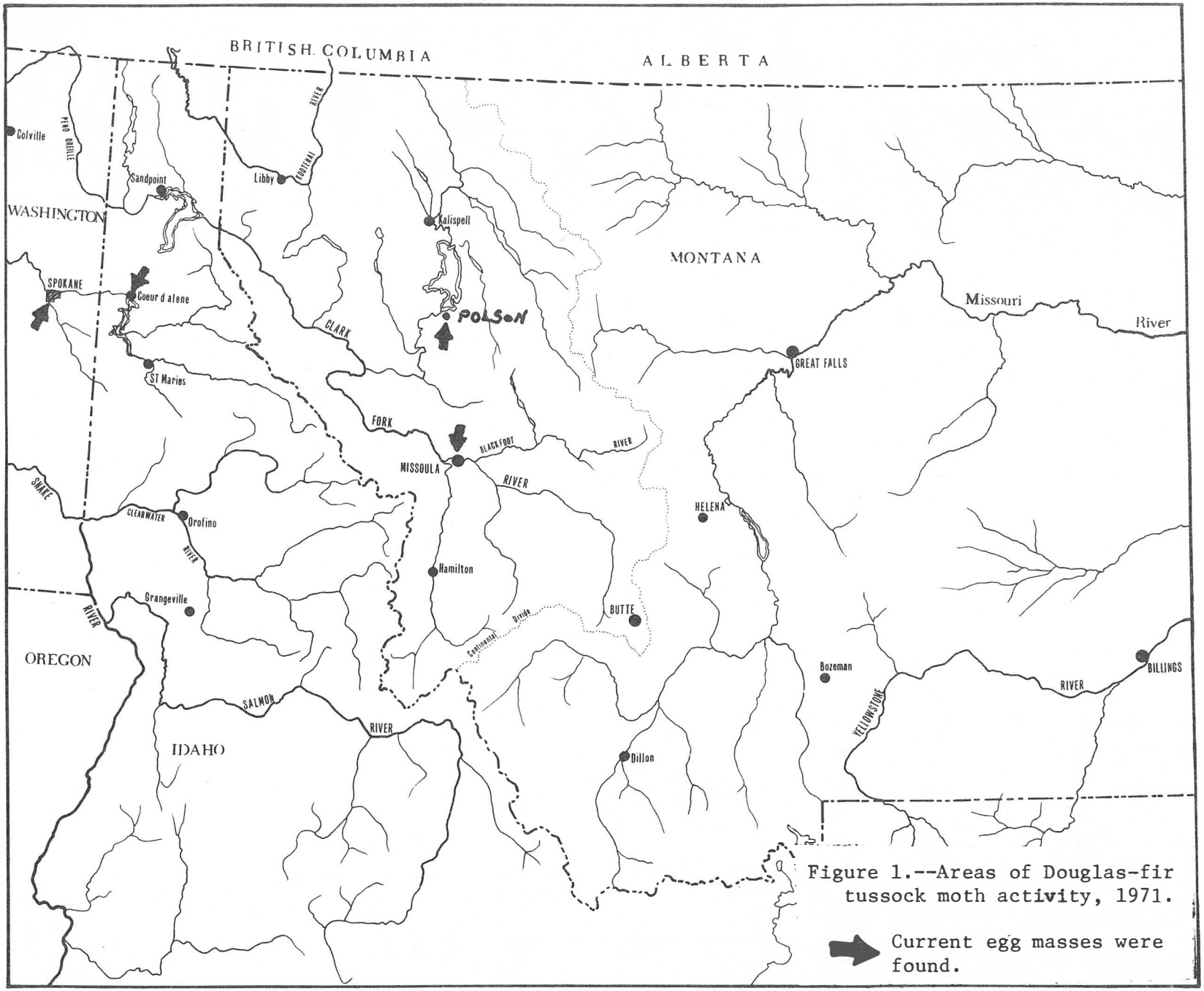

Figure 1.--Areas of Douglas-fir tussock moth activity, 1971.

Current egg masses were found.